

What Is Claimed Is:

1. A viscosity sensor system for measuring the viscosity of a liquid (10) and at least one additional property of the liquid, having:
a piezoelectric viscosity sensor device (5) that is situated completely in the liquid (10) that is to be measured and that has on its surface electrical contact points (6) for an electrical controlling of volume oscillations, these contact points being resistant in relation to the liquid (10);
first electrical supply lines (7) that are resistant in relation to the liquid (10) and that are connected on the one hand to a control/evaluation electronics unit outside the liquid (10) and on the other hand to the contact points (6) on the surface of the viscosity sensor device (5); and
a second sensor device (50; 50'; 60; 60') for acquiring the at least one additional property of the liquid, this second sensor device being provided on the surface of the viscosity sensor device (5) and having electrical contact points (58) on the surface of the viscosity sensor device (5) for an electrical controlling, these contact points being resistant in relation to the liquid (10); and
second electrical supply lines (7', 7'') that are resistant in relation to the liquid (10) and that are connected on the one hand to the control/evaluation electronics unit outside the liquid (10) and on the other hand to the contact points of the second sensor device (50; 50'; 60; 60').
2. The viscosity sensor system as recited in Claim 1,
wherein the piezoelectric viscosity sensor device (5) is formed as a disk-shaped quartz crystal that can be excited to shear oscillations by the electrical control unit, and the contact points (6) of the viscosity sensor device (5) are formed on the front side and on the rear side of the disk-shaped quartz crystal.
3. The viscosity sensor system as recited in Claim 2,
wherein the contact points (6) of the viscosity sensor device (5) leave the front side and the rear side exposed in an edge area, and the second sensor device (50; 60) is provided in the edge area.

4. The viscosity sensor system as recited in one of the preceding claims, wherein the second sensor device (50'; 60') is provided in electrically insulated fashion on the contact points (6) of the viscosity sensor device (5).
5. The viscosity sensor system as recited in Claim 4, wherein the electrical contact points (58) are provided in electrically insulated fashion on the contact points (6) of the viscosity sensor device (5).
6. The viscosity sensor system as recited in one of the preceding claims, wherein the first electrical supply lines (7) are formed as contact springs.
7. The viscosity sensor system as recited in Claim 6, wherein the second electrical supply lines (7) are formed as contact springs.
8. The viscosity sensor system as recited in Claim 7, wherein the first and second contact springs (7; 7') are combined in two-pole contact springs.
9. The viscosity sensor system as recited in one of the preceding claims, wherein the viscosity sensor device (5) is situated in a protective container (2) having a base (20) and a cap (21), this container being capable of being brought into the liquid (10).
10. The viscosity sensor system as recited in Claim 9, wherein the first and second electrical supply lines (7; 7'; 7'') are led out from the container (2) through bushings (3), in particular glass bushings (3), in the cap (21) and/or the base (20) of the protective container (2).
11. The viscosity sensor system as recited in one of the preceding claims, wherein the second sensor device (50; 50') is a temperature sensor device.
12. The viscosity sensor system as recited in one of the preceding claims, wherein the second sensor device (60; 60') is a capacitive sensor device.